

IN THE ABSTRACT

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Abstract

**~~A Digital Filter For 19-Generation, Noise Shaping
and Neighbour Channel Suppression~~**

A polyphase filter of order $x \cdot N$ that ~~is building~~ builds N allpass filters of order $x \cdot N$ ~~according to the present invention~~ has a structure of an allpass filter of order x comprising delay elements with a delay of 1 and at least one multiplier, wherein all delay elements with a delay of 1 are replaced by delay elements with a delay of N and the sampling rate of $f_{S'} = f_s/N$ with f_s being the sampling rate of the input signal. Preferably the multiplier included in the structure of the allpass filter of order x comprises N -time multiplex multiplication coefficients that are used in a predetermined order.

(Fig. 1) --